

Work Order ID 66211

February 7, 2011 1:26:41 PM



Page 1

Item ID: D4198-3

Revision ID: PRELIM

Item Name: Tube, RH

Start Date: 2/07/11 Start Qty: 2.00

Required Date: 2/18/11 Req'd Qty: 2.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Run Start



Stop



Approvals: Process Plan: CL Date: 11/02/07 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4198	PAT PA2

100



Doosan

Doosan Lathe

DOOSAN LATHE

Memo

1- Turn as per Folio FA992

Folio Rev: 2/9

Dwg Rev: PA2

3-Deburr per dwg

0.00

0.00

11.3.31

2

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

11.3.31

2

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY



PRELIMINARY ISSUE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

Item ID: D4198-3

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Tube, RH

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Required Date: 2/18/11 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 Lathe Conv Conventional Lathe	Memo TURN ID AS PER DWG	0.00 0.00		11.4.4		2			
130 QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00		11.4.4		2			
140 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		B.A 11/04/04		2	0		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Work Order ID 66211

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Page 3

Item ID: D4198-3

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Tube, RH

Start Date: 2/07/11 Start Qty: 2.00



Cust Item ID:

Required Date: 2/18/11 Req'd Qty: 2.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

Identify as per dwg & Stock Location *GA*

0.00

SS 11/04/20



Packaging

Memo

B 66205

0.00

(2)

Packaging

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11-06-9
(2)

POSITIVE RECALL
EFFECTIVE *11/02/08* AUTH *W*
RELEASED _____ DATE _____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

February 7, 2011 1:26:41 PM

Work Order ID: 66211



Parent Item: D4198-3



Parent Item Name: Tube, RH

Start Date: 2/07/11

Required Date: 2/18/11

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-10-30 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304TR1.125W.065

Purchased

No

100

f

20.0000

1

2.105263



ml 11-3-31

304 RD Tube 1.125 x .065w

Location

Loc Qty

Loc Code

MAT018

20

108225✓

20

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 66211
Description: Tube, R.		Part Number: 4198-3
Inspection Dwg:	Rev: PA2	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒

First Article

☒

Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.005 \pm	$\pm 0.02 - 0.0$	1.006	/		2 σ .02	
2.00	$\pm .030$	1.997	/			
90°	$\pm 1/2^\circ$	90°	/			
1.125	$\pm .010$	1.122	/			
.065 REF	$\pm .010$.072	/			
.265 ϕ	$\pm 0.006 - 0.001$.265	/			
.75	$\pm .030$.757	/			
.48	$\pm .030$.472	/			
.30	$\pm .030$.292	/			
12.00	$\pm .030$	12.000	/		2 σ .15	
.125 ϕ	$\pm 0.005 - 0.001$.125	/		2 σ .02	
15°	$\pm 1/2^\circ$	15°	/			
15°	$\pm 1/2^\circ$	15°	/			

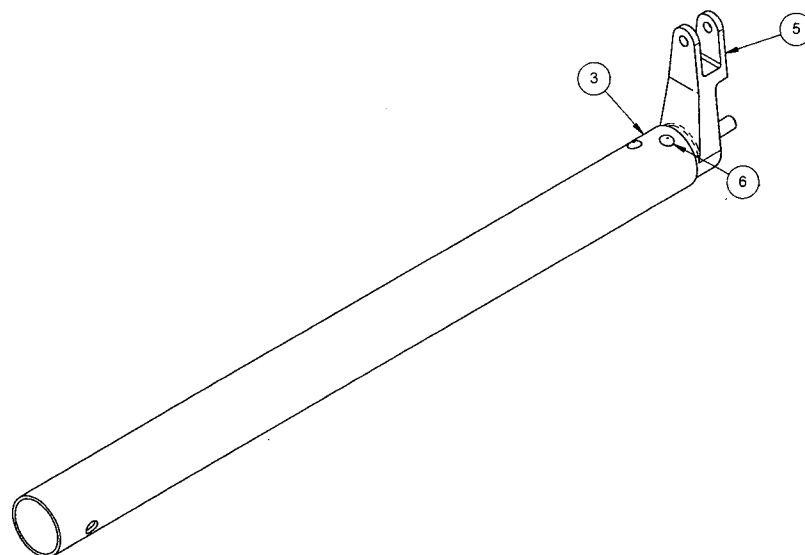
Measured by: <i>[Signature]</i>
Date: 11.4.4

Audited by: <i>[Signature]</i>
Date: 11/04/04

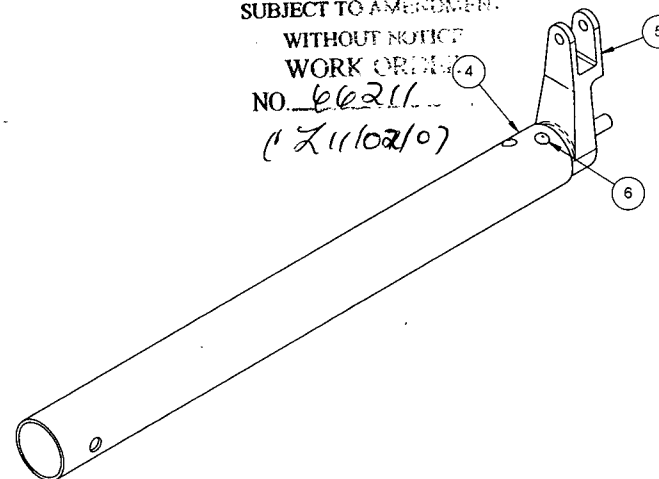
Prototype Approval:
Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

ITEM NO.	QTY. -041	QTY. -043	PART NUMBER	DESCRIPTION
1	X		D4198-041	LH THROTTLE BELLCRANK ASSEMBLY
2		X	D4198-043	RH THROTTLE BELLCRANK ASSEMBLY
3	1		D4198-1	TUBE, LH
4		1	D4198-3	TUBE, RH
5	1	1	D4198-5	BELLCRANK
6	2	2	MS20470AD4-20	RIVET



D4198-041 LH THROTTLE BELLCRANK ASSEMBLY



D4198-043 RH THROTTLE BELLCRANK ASSEMBLY

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WORK ORDER NO. 66211
(12/11/02/07)

PRELIMINARY ISSUE

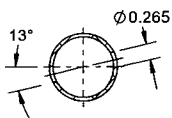
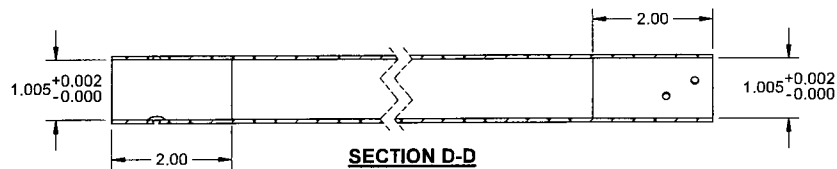
10.11.03

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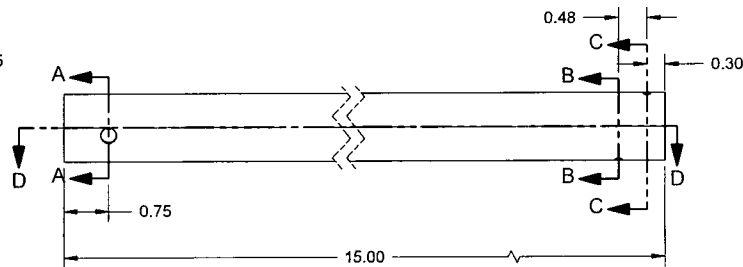
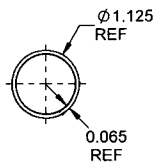
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: (-041) 1.28 lbs
(-043) 1.10 lbs

PA2	NEW ISSUE	10.11.03
REV.	DESCRIPTION	BY DATE
DESIGN		
DRAWN		
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		
DATE	10.11.03	

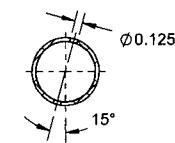
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4198	REV. PA2
TITLE THROTTLE BELLCRANK	SCALE NTS
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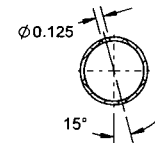
SECTION A-A



D4198-1 TUBE, LH



SECTION B-B



SECTION C-C

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WORK ORDER
NO. 66211

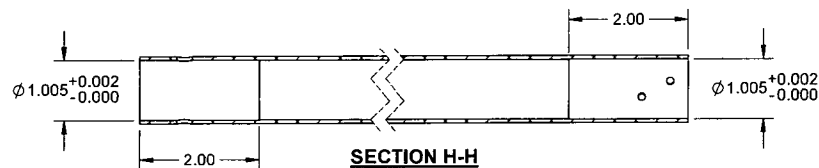
PRELIMINARY ISSUE

10.11.03

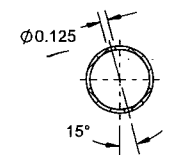
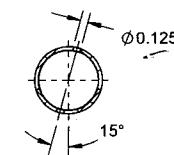
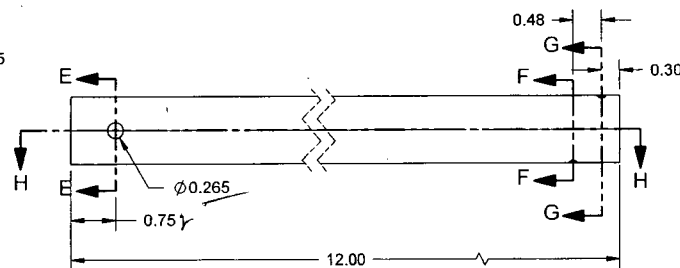
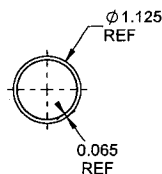
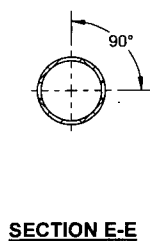
NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SEAMLESS ROUND TUBING, OD $\phi 1.125$ X 0.065 WALL THICKNESS
PER ASTM A213 OR ASME SA213 OR ASTM A269
REF DART SPEC M304TR1.158W.049
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.91 lbs

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MFG. APPR.		D4198	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		THROTTLE BELLCRANK	NTS
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NO. 66211



SECTION F-F

SECTION G-G

Front

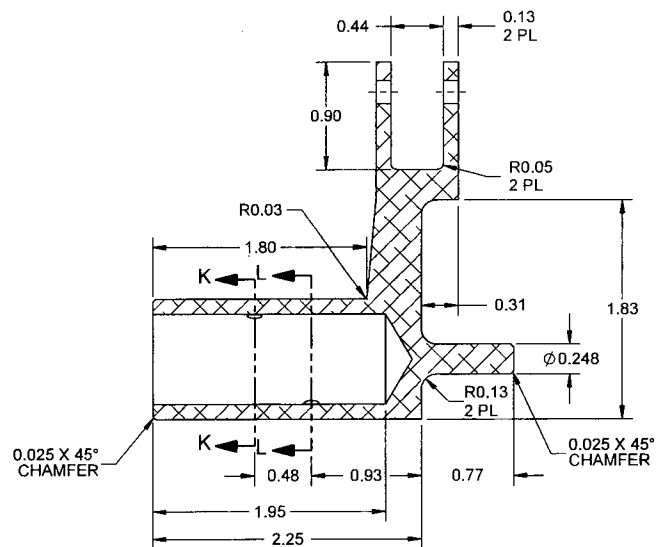
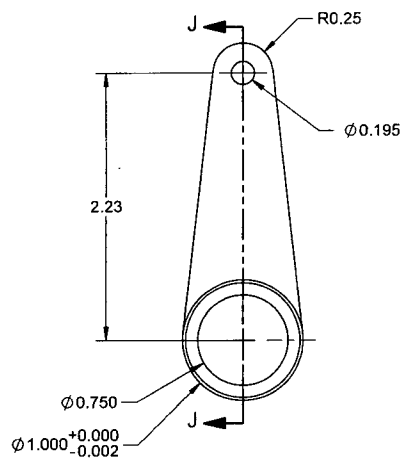
D4198-3 TUBE, RH

PRELIMINARY ISSUE

10.11.03

- NOTES:
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SEAMLESS ROUND TUBING, OD $\phi 1.125$ X 0.065 WALL THICKNESS
PER ASTM A213 OR ASME SA213 OR ASTM A269
REF DART SPEC M304TR1.158W.049
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.71 lbs

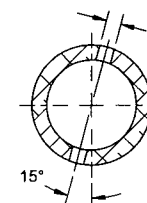
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DRAWN	DES	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA2
MFG. APPR.		D4198	SHEET 3 OF 4
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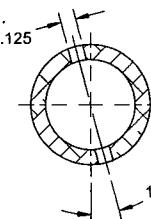
SECTION J-J

D4198-5 BELLCRANK

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NO. 66-211



SECTION K-K



SECTION L-L

PRELIMINARY ISSUE

10.11.03

NOTES:

- 1) MATERIAL: AISI 303 STAINLESS STEEL ROUND BAR
PER ASTM A276
REF DART SPEC M304B
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.020 TO 0.030 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.42 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
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